



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,052	11/01/2005	Nobutoshi Arai	0020-5354PUS1	6379
2292 7590 06/04/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER VALENTINE, JAMI M	
			ART UNIT 2815	PAPER NUMBER
			NOTIFICATION DATE 06/04/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/528,052	Applicant(s) ARAI ET AL.	
	Examiner Jami M. Valentine, Ph.D.	Art Unit 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 2-7 and 9-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/17/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Application

1. **Claims 1-32** are pending in this application.

Election/Restrictions

2. Applicant's election without traverse of Group VI (Claim 8) in the reply filed on 5/16/2007 is acknowledged. **Claims 2-7 and 9-32** are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5/16/2007. **Claims 1 and 8** are examined in this Office action.

US National Phase of PCT

3. Acknowledgment is made that this application is the US national phase of international application PCT/JP03/11877 filed 18 September 2003 which designated the U.S. and claims benefit of JP 2002-273370, filed 19 September 2002 and JP 2002-273384, filed 19 September 2002.

Foreign Priority

4. Acknowledgment is made that the certified copy of the foreign priority document has been received in the national stage application from the International Bureau.

Information Disclosure Statement

5. Acknowledgment is made that the information disclosure statement has been received and considered by the examiner. If the applicant is aware of any prior art or any other co-

Art Unit: 2815

pending applications not already of record, he/she is reminded of his/her duty under 37 CFR 1.56 to disclose the same.

Drawings

6. The drawings are objected to because figures 1C, 3C, 3D, 9B, 10A, 10C, 11, 13B, 13C, 13D, 13B, 30E, 37A, 38, 48B, 48D, 49B, 49D, 50C, 52B, and 54 are informal. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Art Unit: 2815

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

9. **Claim 1** is objected to because of the following informalities: Claim 1 has the following language "...application of a specified voltage to between the first electrode and the second electrode ..." There is a grammatically error. Appropriate correction is required.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. **Claims 1 and 8** are rejected under 35 U.S.C. 102(b) as being anticipated by Kado et al. (US Patent No 5,731,598) hereinafter referred to as Kado.

12. Per **Claim 1** Kado (e.g. figure 1) discloses a resistance-changing function body, comprising

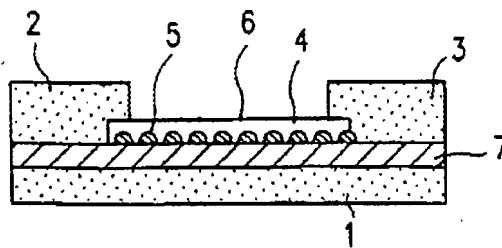
- an object made of a first substance (4) and interposed between a first electrode (2) and a second electrode (3); and
- a plurality of particles (5) made of a second substance and arranged within the object so that an electrical resistance between the first electrode and the second

Art Unit: 2815

electrode is changed before and after application of a specified voltage to between the first electrode and the second electrode, wherein the first substance makes an electrical barrier against the second substance. (see column 6 lines 40-51)

13. Additionally, claim 1 recites the performance properties of the device before and after application of a specified voltage. This functional limitation does not distinguish the claimed device over the prior art, since it appears that this limitation can be performed by the prior art structure of Kado. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) See MPEP 2114.

FIG. 1



Prior Art: Kado Figure 1 teaching a resistance-changing function device.

14. Per **Claim 8** Kado (e.g. figure 1) discloses the fabrication of at least two memory resistance-changing function bodies as defined of claim 1, arranged in a direction parallel to a substrate (column 6 lines 27-36 discloses the patterning of multiple devices during one sputtering process.) as well as where the objects made of the first substance of memory cells mutually adjacent in the direction parallel to the substrate are integrally continuously formed (e.g. figure 1, see also column 6 lines 19-25)

Art Unit: 2815

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jami M. Valentine, Ph.D. whose telephone number is (571) 272-9786. The examiner can normally be reached on Mon-Thurs 8:30am-7pm EST. **NOTE:** From June 18 through August 8th, The examiner will be available *only* on Thursdays and Fridays 8:30am-7pm EDT, due to jury duty service.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on (571) 272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jami M Valentine, Ph.D.
Examiner
Art Unit 2815

JMV


**JEROME JACKSON
PRIMARY EXAMINER**